SMIRNOV, A.P.

11(0) PHASE I BOOK EXPLOITATION SOV/1723

Bronzov, Anatoliy Samsonovich, and Aleksandr Petrovich Smirnov

Bureniye naklonnykh skvazhin (Directional Drilling) Moscow, Gostoptekhizdat, 1958. 169 p. 2,000 copies printed.

Executive Ed.: Ye. A. Shakhmayeva; Tech. Ed: I.G. Fedotova

PURPOSE: This book is intended for oil and gaswell drillers

COVERAGE: The author discusses the development of directional drilling in the Soviet Union and abroad and describes the latest technology and techniques employed in this type of drilling. He also gives detailed information on the drilling tools and instruments and on the application of turbine and rotary methods. The book is intended to acquaint Soviet drillers with the latest developments in directional drilling which will be greatly extended in the near future. The bibliography contains 62 references, of which 24 are Soviet, 36 English, 1 German, and 1 French.

TABLE OF CONTENTS:

KURASHEV, V.; SEREBRYAKOV, N.; SMIRNOV, A.

Influence of automatic processes in petroleum production on the organization of labor. Sots.trud 4 no.8:48-53 Ag '59. (MIRA 13:1)

(Oil fields--Production methods)
(Automation)

SMIRNOV, A.

Organization of labor under conditions of the automation of petroleum production processes. Biul.nauch. inform.; trud i zar. plata 3 no.1:10-16 '60. (MIRA 13:6)
(Automation) (Oil fields--Production methods)

SHATSOV, Nakhman Isaakovich; SMIRNOV, Aleksandr Petrovich; ASAN-NURI, A.A., red.; PETROVA, Ye.A., vedushchiy red.; GANINA, L.V., tekhn.red.

[Deep-drilling practices in foreign countries] Tekhnologiia bureniia glubokikh skvazhin za rubezhom. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 268 p. (MIRA 13:11)

(United States--Boring)

SMIRNOV, A.R., inzhener.

The C-347 unloader for unloading cement from railroad cars. Mekh. stroi. 12 no.2:18-20 F '55. (MIRA 8:4)
(Loading and unloading) (Cement)

SMIRNOV, A.S., inzh.

Technically based norms of labor and machinery expenditure for the maintenance and repair of milled peat fields. Torf. prom. 39 no.6:1-3 '62. (MIRA 16:7)

1. Shaturskiy torfotrest.
(Peat industry—Production standards)

MOGILEVSKIY, Dmitriy Aleksandrovich, dots.; BABKOV, Valeriy Fedorovich, prof., doktor tekhn. nauk; SMIRNOV, Andrey Sergeyevich, dots., kand. tekhn.nauk; ABRAMOV, Leonid Tikhonovich, kand. tekhn. nauk; ZAYTSEV, Filipp Yakovlevich, kand. tekhn. nauk; ZAMAKHAYEV, Mitrofan Semenovich, prof., kand. tekhn. nauk; NIKITIN, Sergey Mikhaylovich, inzh.; DEBERDEYEV, B.S., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Survey and design of airports] Izyskaniia i proektirovanie aerodromov. [By] A.Mogilevskii i dr. Izd.2. Moskva, Avtotransizdat, 1963. 703 p. (MIRA 16:11)
(Airports--Design and construction)

SMIRNOV, A.S., kand.tekhn.nauk, dotsent

Analogy of the mechanics of continua and discrete media. Trudy MIIGAIK no.49:41-49 '62. (MIRA 16:6)

1. Kafedra vysshey matematiki Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii.

(Continuity)

ACCESSION NR: AP4011497 S/0051/64/016/001/0143/0147

AUTHOR: Smirnov, A.S.; My*sev, I.P.

TITLE: Approximate expression for the coefficient of light scattering by dielectric non-absorbing spheres

SOURCE: Optika i spektroskopiya, v.16, no.1, 1964, 143-147

TOPIC TAGS: light scattering coefficient, light scattering, scatterin · by spheres, dielectric particle, dielectric sphere

ABSTRACT: An approximate expression is derived for the coefficient K of scattering by non-absorbing spherical dielectric particles. K is defined as the ratio of the scattered light flux to the incident flux on the geometric cross section of the particle. The derivation is based on the similarity of the curves characterizing the variation of K with the parameter ρ (the additional phase difference acquired by the ray passing through the center of the particle as compared with the ray propagating in vacuum) for different values of the index of refraction m as reported in the literature. The final linear equation is of the form

$$K_m(\rho) = A_m + B_m K_1(\rho),$$

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ACC.NR: AP4011497

where K_m and B_m are coefficients the dependence of which on m in the range from 1 to 2 is given by formulas and curves. The probable errors involved in using the formula are evaluated. In most cases the errors are not significant. Moreover, the deduced formula is easy to use, whereas precise formulas can be used in practice only with the aid of computers. Orig.art.has: 10 formulas, 7 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 11Mar63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 000 OTHER: 003

Card 2/2

SMIRNOV, A S

PHASE I BOOK EXPLOITATION SOV/4727

Mogilevskiy, Dmitriy Aleksandrovich, Valeriy Fedorovich Babkov, Andrey Sergeyevich Smirnov, Leonid Tikhonovich Abramov, Filipp Yakovlevich Zaytsev, Mitrofan Semenovich Zamakhayev, and Sergey Mikhaylovich Nikitin

Izyskaniya i proyektirovaniye aerodromov (Site Selection and Planning of Airfields) Moscow, Avtotransizdat, 1959. 566 p. Errata slip inserted. 1,300 copies printed.

Ed.: (Title page): V.F. Babkov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V.G. Chvanov; Tech. Ed.: N.V. Mal'kova.

PURPOSE: This textbook is intended for students of schools of higher education specializing in airfield-construction engineering and students of tekhnikums and other schools studying airfield construction. It may also be used by staff members of organizations for airfield planning, construction, and operation.

COVERAGE: The book deals with the principal requirements for airfield design and construction. The topics discussed include landing-strip dimensions, relief and drainage patterns, and the design and construction of surfaces and pavements. Airfield site selection is also included. The book purportedly reflects methods

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used in the USSR and other countries and developmental trends in airfield design and planning. Section 3 Chapter 2, Section 18 Chapter 5, Chapters 21 to 24 (excluding Section 93), and Chapters 26 to 30 were written by V.F. Babkov. Chapters 11 to 15 and Section 93, Chapter 22 were written by Candidate of Technical Sciences L.T. Abramov. The Introduction, Chapters 1 to 5 (excluding Sections 3, 18, and 21), Chapters 8 to 10, and Chapter 20 were written by Docent D.A. Mogilevskiy. Chapters 18, 19, and 25 to 32 were written by Candidate of Technical Sciences A.S. Smirnov; Chapters 16 and 17, by Candidate of Technical Sciences F. Ya. Zaytsev; Chapter 6, by F. Ya. Zaytsev and A.S. Smirnov; Chapter 31, by Candidate of Technical Sciences M.S. Zamakhayev; and Section 21, Chapter 5, and Chapter 7, by Engineer S.M. Nikitin. Reviewers are Professor A.K. Birulya; staff members of an airfield-planning organization under the direction of Candidate of Technical Sciences P.A. Dudkin and including V.N. Avdeyev, V.A. Kartashev, A.G. Pal'chev, A.N. Popov, and I.G. Ptitsin; and a team of instructors from the Khar'kovskiy avtomobil'no-dorozhnyy institut (Khar'kov Automobile and Highway Institute) under the direction of Professor I.A. Romanenko and including L.A. Barats, N.I. Baskevich, A. Ye. Bel'skiy, and Ya. A. Kaluzhskiy. There are no references.

PART V. DESIGNS OF AIRFIELD PAVEMENTS

Card 3/15

Site Selection and Planning of Airfields SOV/4727

AVAILABLE: Library of Congress

Card 15/15

AC/pw/mas
2-24-61

AID P - 5460

Subject : USSR/Aeronautics - meteorology

Card 1/1 Pub. 135 - 6/29

Author : Smirnov, A. S., Eng-Major

Title : Radio-technical weather reconnaissance

Periodical : Vest. vozd. flota, 2, 29-32, F 1957

Abstract : The importance of radio-technical weather reconnaissance is stressed in this article. Further on the author describe how the weather reconnissance prior to and during the flight is carried out with the aid of radio-technical stations. Two photos. The article is of informative value.

Institution : None

Submitted : No date

SMIRNOV, A.S., inzhener.

Number of cycles in upland bogs. Torf.prom. 34 no.2:16-17 '57. (MLRA 10:3)

1. Torfopredpriyatiye Osanovo-Dubovoye.
(Peat industry)

SMIRNOV, Aleksandr Sergeyevich; POPOV, A.S., red.; MALEK, Z.N., tekhn.red.

[Effective collective labor agreements] Kollektivnyi dogovor v deistvii; iz opyta raboty fabrichnogo komiteta profsoiuza. [Moskva] Izd-vo VTsSPS Profizdat, 1957. 76 p. (MIRA 11:4)

1. Predsedatel' fabrichnogo komiteta fabriki "Skorokhod" imeni Ya.Kalinina. (for Smirnov)
(Collective labor agreements--Shoe manufacture)

ANDREYEV, Oleg Vladimirovich; BABKOV, Valeriy Fedorovich; GERBURT-GEYBOVICH, Andrey Vladimirovich; ZAMAKHAYEV, Mitrofan Semenovich; KRUTETSKIY, Yevgeniy Vladimirovich; ORNATSKIY, Nikolay Petrovich; SEDEL'NIKOV, Pavel Ivanovich; SMIRNOV, Andrey Sergeyevich; SHESTAKOV, P.N.[deceased] PLOTNIKOV, S.A., redaktor; KOGAN, F.L., tekhnicheskiy redaktor.

[Examples of highway design] Primery proektirovaniia avtomobil'nykh dorog. Izd.2-e, perer. Moskva, Nauchno-tekhn.izd-vo avtotransp. lit-ry, 1955. 283 p. (MLRA 8:12)
(Roads)

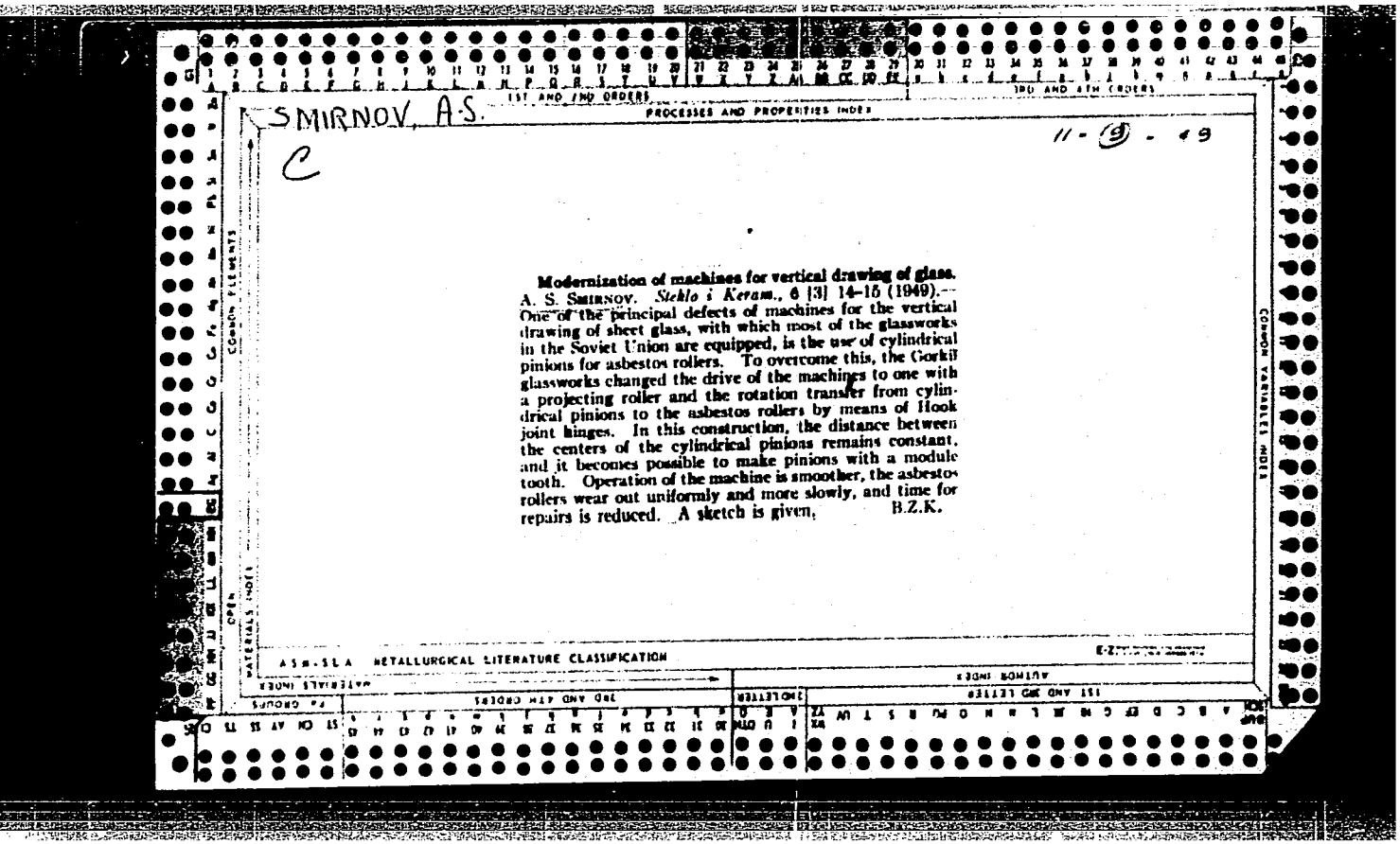
SMIRNOV, A.S.

Particularities in the designing of foundations for rotary diffusion apparatus. Sakh.prom. 31 no.3:12-14 Mr '57. (MLRA 10:4)

1.Giprosakhar.
(Foundations)

BALAKSHIN, O.B., kand. tekhn. nauk; BYKHOVSKIY, M.L., prof., doktor tekhn. nauk; VOLODIN, Ye.I., kand. tekhn. nauk; GRIGOR'YEV, I.A., kand. tekhn.nauk; DRAUDIN-KRYLENKO, A.T., inzh.; IVANOV, A.G., kand. tekhn.nauk; KOZLOV, M.P., kand. tekhn. nauk; KOROTKOV, V.P., prof.; KOCHENOV, M.I., kand. tekhn.nauk; KUTAY, A.K., kand. tekhn. nauk; MARKOV N.N.,kand. tekhn. nauk; PALEY, M.A., inzh.; RAYBMAN, N.S., kand. tekhn.nauk; ROSTOVYKH, A.Ya., kand. tekn. nauk; RUMYANTSEV, A.V., kand. tekhn.nauk; SARKIN, I.G., prof.; SMIRNOV, A.S., inzh.; TAYTS, B.A., prof., doktor tekhn. nauk; YAKUSHEV, A.I., prof., doktor tekhn. nauk; NESTEROV, V.D., inzh., nauchnyy red.; CHUDOV, V.A., inzh., nauchnyy red.; GAVPILOV, A.N., doktor tekhn.nauk, prof., red.; BLAGOSKLONOVA, N.Yu., inzh., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Manufacture of instruments and means of automatic control: a manual in five volumes] Priborostroenie i sredstva avtomatiki; spravochnik v piati tomakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Vol.1.[Interchangeability and engineering measurements] Vzaimozameniaemost' i tekhnicheskie izmereniia. 1963. 568 p. (MIRA 16:8)
(Electronic measurements) (Automatic control)



SMIRNOV, A.S.

C

11-9-49

Modernization of machines for vertical drawing of glass. A. S. Smirnov. *Steklo i Keram.*, 6 [3] 14–15 (1949).—One of the principal defects of machines for the vertical drawing of sheet glass, with which most of the glassworks in the Soviet Union are equipped, is the use of cylindrical pinions for asbestos rollers. To overcome this, the Gorkii glassworks changed the drive of the machines to one with a projecting roller and the rotation transfer from cylindrical pinions to the asbestos rollers by means of Hook joint hinges. In this construction, the distance between the centers of the cylindrical pinions remains constant, and it becomes possible to make pinions with a module tooth. Operation of the machine is smoother, the asbestos rollers wear out uniformly and more slowly, and time for repairs is reduced. A sketch is given. B.Z.K.

SMIRNOV, A. T.

Glass Manufacture

Mechanization of transport of glass silicates. Stek. i ker. 9 No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

LOSEV, David Platonovich; POLISAR, Grigoriy Leyzerovich; FILIMONOV, Yuriy Polikarpovich; AFOSHIN, A.N., kand. tekhn.nauk, retsenzent; SAVCHENKO, L.T., inzh., retsenzent; SMIRNOV, A.S., kand. tekhn. nauk, nauchnyy red.; LESKOVA, L.R., red.; KRYAKOVA, D.M., tekhn. red.

[Elements and networks of contactless remote control devices] Elementy i uzly beskontaktnykh telemekhanicheskikh ustroistv. Elementy i uzly beskontaktnykh telemekhanicheskikh ustroistv. Leningrad, Sudpromgiz, 1962. 246 p. (MIRA 15:12)
(Remote control) (Pulse techniques (Electronics))

S/063/60/005/006/007/014
A051/A026

AUTHORS: Smirnov, A.S., Candidate of Chemical Sciences

TITLE: Water Decontamination From Radioactive Substances

PERIODICAL: Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva im. D.I. Mendeleyeva, 1960, No. 6, Vol. 5, pp. 651-657

TEXT: A summary is given of the existing methods of water decontamination from radioactive substances, the disadvantages and favorable aspects of each one, and a description of the difficulties encountered in these techniques. Special mention is made of the causes for radioactive substance occurance in waters, both from natural phenomena, as well as synthetic means. It is suggested carrying out systematic checks of the radioactive content in different water systems. Some of the methods used at the present time for water deactivation discussed in the article are: 1) deactivation of natural water supplies, whereby it is pointed out that no all-consuming method actually exists as yet, and attempts to use the same chemical principles as those for non-radioactive water purification have proven unsuccessful due to the extremely low weight concentrations of the radioactive substances both in surface and subterranean waters. These concentrations are considerably less than the resolving power of the usually adopted purification methods.

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Water Decontamination From Radioactive Substances S/063/60/005/006/007/014
A051/A026

Mention is made of the assorted methods described in world literature such as: a) coagulation, using aluminum and iron sulfate coagulants, ferrous chloride, with additions of lime or other alkaline reagents, phosphates, activated silicon acid, various clays, polyelectrolytes, etc. b) Precipitation with reagents and coprecipitation, - these methods are used to eliminate colloidal and coarsely-dispersed radioactive admixtures and some of the dissolved parts. Lime, sodium carbonate and other reagents are used as the reagents. c) ionic exchange or ionation; the effectiveness of this method for eliminating radioisotopes is said to be very high. Other methods suggested in the literature are: precipitation of radioactive substances with powdery metals (iron, aluminum, copper) (Ref. 11), water treatment using manganese compounds, etc (Ref. 27), distillation methods or evaporation, freezing, etc. It is pointed out that all the suggested methods have the same disadvantage, namely, that after the deactivation of the water, great quantities of radioactive waste remains. The problem has not as yet been solved for safely eliminating the radioactive waste. The present article does not deal with this problem. 2) Coagulation: Experiments conducted in the USA in Oak Ridge are referred to, stating that the latter method has great practical possibilities. $Al_2(SO_4)_3$, $Fe_2(SO_4)_3$ and $FeCl_3$ were used in the tests (Ref. 11). It

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is added here that the coagulation method is particularly suitable for elimination of radioactive substances, adsorbed by natural coarsely-dispersed admixtures, determining the turbidity of the water. Laboratory tests of the coagulation effectiveness of beta-activity removal, using $Al_2(SO_4)_3$; $Fe_2(SO_4)_3$ and Na_3PO_4, separately and together, in doses of 15-180 mg/l, showed that the β-active suspensions were completely removed and the dissolved β-active admixtures- partially. The Sr^{89}, Sr^{90}, Ba 140 are best removed at a pH of about 10. The effectiveness of the $Fe_2(SO_4)_3$ and $Al_2(SO_4)_3$ were found to be about the same. Reference is further made to the many attempts at removing radioisotopes from water, using clays (Ref. 11,13,14). With respect to this method it is pointed out, that, although, a rather high degree of removal is accomplished of certain of the radioisotopes, the shortcoming here is the need for large amounts of clay. This brings about (especially if the method is combined with the coagulation using chemicals) the formation of large amount of radioactive slag. 3) Filtration through sand: In Ref. 11 it was pointed out that ordinary filtration through quartsite filters is ineffective for removing radioactive materials, if not considering the mud film on the surface of the filters. A noticable degree of deactivation was obtained in removing the Co^{60} and Ce^{144} from water using industrial slow quartsite filters (Ref. 18). Other data are available on the effectiveness of the

removal of radioactive material using sand and other filtering materials (Ref. 19). It is stated that a number of research workers consider that the filtration on rapid quartsite filters in itself, is not an effective means of radioactivity removal from water (Ref. 12,20,21). The rapid filters are suggested only for the case of Y^{91} and Zr^{95}-Nb^{95} removal, where 99% removal can be reached. The author adds, however, that if, prior to the filtration, the water is coagulated, a high degree of removal of several radioisotopes can be accomplished. 4) Lime-soda softening in coprecipitation: In regard to this method it is noted that the use of the said method, from the practical point of view for water decontamination, is of little value in large water supply stations, since they do not have the proper equipment. However, it is felt that the method would be practical in stations where lime-soda softening or coagulation is performed (Ref. 23). It is recommended coprecipitating Sr, using calcium carbonate, by manyfold additions of the calcium chloride and recirculating of the formed precipitate. Conclusions are formed here that the radio-strontium may be eliminated by forming mixed crystals of calcite-strontianite (without heating) or aragonite-strontianite (with heating). The single passing of water through the lime-soda softener reduces the concentration of the radio-strontium by 50%. The repeated precipitation of the $CaCO_3$ removes over 90% of

large water mains, the ionating method is not recommended. It is considered to be of use in small stations or in portable set-ups and individual instruments for decontamination of low-salt water. It is pointed out that the synthesis of selective ionites would render the ionating method applicable for the decontamination of waters with a high salt content, and also at large water stations. In Reference 29 mention is made of the use of illuminating prefilters in the removal of Sr^{90}-Y^{90}, Sr^{89}, P^{32}, Cs^{137} from river water, in portable equipment with a production output of 400 to 4000 l/h . In addition to the illuminating prefilters the equipment also consisted of successively connected H-cathionite (Lewatit s-100) and OH-anionite filters (Lewatit-MN). The radioisotopes were eliminated by 99.997%, whereby the prefilter removed 93-95% of the activity. Similar results were obtained by the same authors (Ref. 30) by using a pump having a motor, prefilter, illuminating filter, decontaminating filter, preliminary desalting filter and completely desalting filter. Vermiculite (?) is mentioned as a cheap material recommended as an ion-exchange material (Ref. 22). At a conference of the United Austrian Association of Specialists it was pointed out that complete removal of radioactivity cannot be accomplished in water-supply stations for technical and economical reasons, and it was suggested that, at least, partial removal be achieved, by coagula-

tion and precipitation, using elevated dosages of reagents. It is finally suggested that a systematic control be carried out at the water stations, on the radioactivity of the water supply and other water sources. There are 13 tables, 31 references: 14 are English, 5 German, 7 Soviet, 4 Italian, 1 Czech.

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SMIRNOV, A. S.

Purification of water from radioactive substances. Analele chimie 16 no.3:121-134 Jl-S '61.

(Water) (Radioactive substances)

S/169/63/000/002/029/127
D263/D307

AUTHORS: Lapshin, V. I., Peremitin, B. V. and Smirnov, A. S.

TITLE: Study of the possibility of rapid measurement of plutonium concentration in air with the aid of inertial precipitator (impactor)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 19-20, abstract 2B138 (Sb. rabot po nekotorym vopr. dozimetrii i radiometrii ionizir. izlucheniy. Vyp. 2, M., Gosatomizdat, 1961, 177-186)

TEXT: It is suggested that a ring inertial precipitator (impactor) should be used to collect the plutonium aerosol, together with a scintillation γ counter. The ring gap is 1.7 mm, and the volume flow rate of air is 550 - 700 l/min. Operation of the impactor is based on the fact that sizes of the natural α-active aerosols are considerably below those of the industrial plutonium aerosol. Special parallel experiments with the impactor and filtration through ФПП (FPP) fabric showed that an average of 1%, and not more than

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Study of the possibility ...

3%, of natural radioactive aerosols (decay products of Rn and Tn) is deposited on the backing of the impactor. Deposition efficiency of the plutonium aerosol is 70%. To ensure rapid measurement (30 - 45 min) of low Pu concentrations in the air, with these characteristics of the impactor, the authors suggest the use of a combination of the impactor with the α-radiation energy discrimination method, or with a simple single-channel α-spectrometer. The basic diagram of such combined instrument is given. [Abstracter's note: Complete translation.]

Card 2/2

SMIRNOV, A.S.

Cambrian oil. Neftianik 7 no.11:26-27 N '62. (MIRA 16:6)

(Siberia—Petroleum geology)

SINITSYN, V.A., kand. tekhn. nauk; SMIRNOV, A.S., inzh.

Dip needle for surveying frozen vertical holes in shaft sinking. Shakht. stroi. 7 no.8:11-13 Ag '63.
(MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut.

L 45613-65 EWT(d)/EPA(s)-2/EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b) 29
EWP(1)/EWA(c) Pf-4 JD/HM B
ACCESSION NR: AP5010978 UR/0286/65/000/007/0165/0165

AUTHOR: Kholopov, Yu. V.; Smirnov, A. S.

TITLE: Portable gun for ultrasonic two-side spot welding of metal. Class 49, No. 169987

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 165

TOPIC TAGS: ultrasonic welding, spot welding, ultrasonic welder

ABSTRACT: An Author Certificate has been issued for a portable ultrasonic welder for two-side spot welding of metals. The welder is made in the form of manually operated plane-parallel tongs which have a metallic contact point fixed at the tip of each jaw. The contact points are coaxial with each other and are perpendicular to the plane of the parts to be welded. A transducer is fitted on one of the jaws. Orig. art. has: 1 figure. [MS]

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya (All-Union Scientific Research Institute of Electric Welding Equipment)

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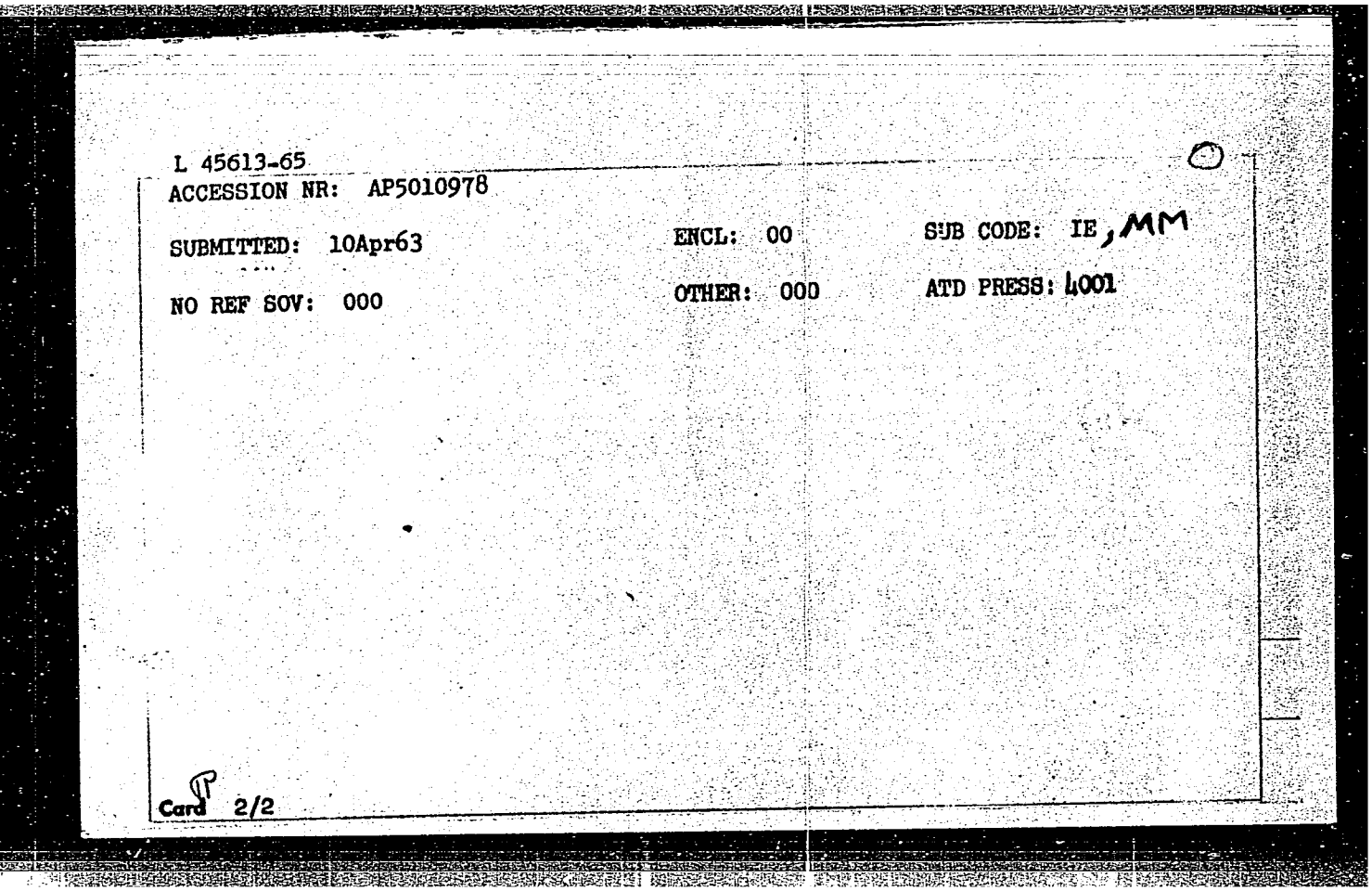


L 45613-65
ACCESSION NR: AP5010978

SUBMITTED: 10Apr63 ENCL: 00 SUB CODE: IE, MM

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4001

Card 2/2

SMIRNOV, A.S.; MALEVSKIY, A.Yu.; VANYUKOV, A.V.

Converting nickel-bearing copper mattes. TSvet. met. 35 no.1: 31-37 Ja '62. (MIRA 16:7)
(Copper--Metallurgy) (Nickel--Metallurgy)

SMIRNOV, A.S.; SINEV, L.A.; VANYUKOV, A.V.; POPKOV, A.N.

Reducing magnetite in converter slag for the purpose of depleting them of valuable metal. TSvet. met. 36 no.7:25-29 Jl '63. (MIRA 16:8)

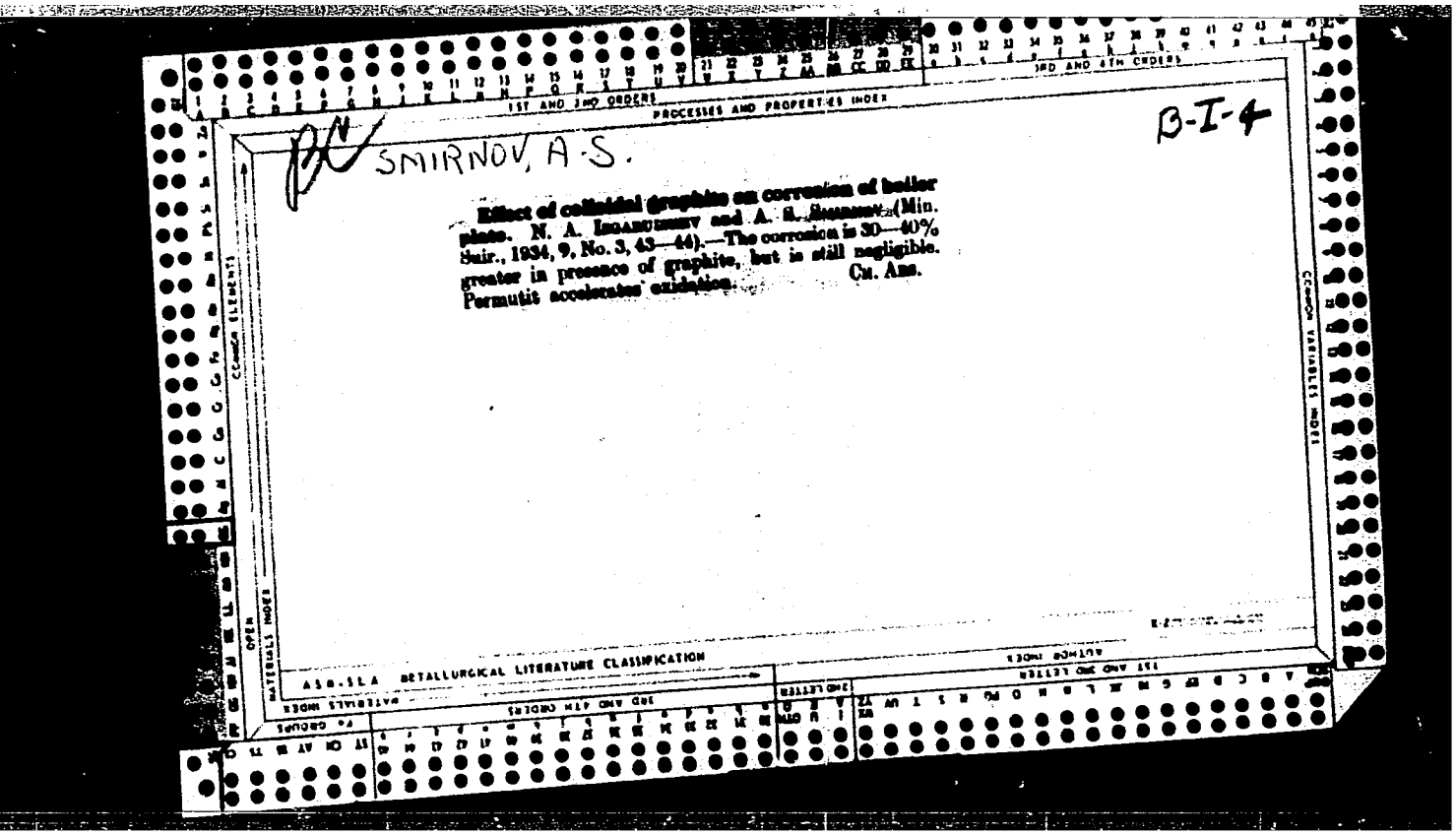
(Slag--Analysis)

PALEY, Mark Abramovich; SMIRNOV, A.S., nauchn. red.

[Deviations in the shape and arrangement of surfaces] Otkloneniia formy i raspolozheniia poverkhnostei. Moskva, Izd-vo standartov, 1965. 117 p. (MIRA 18:8)

SMIRNOV, A.S.

About the article "Standard losses." Standardizatsiia 29 no.6: 49-50 Je '65. (MIRA 18:12)



SMIRNOV, A.S.

B-I-4

Effect of colloidal graphite on corrosion of boiler plate. N. A. [illegible] and A. S. [illegible] (Min. Snir., 1934, 9, No. 3, 43—44).—The corrosion is 30—40% greater in presence of graphite, but is still negligible. Permutit accelerates oxidation. Cu. Abs.

SMIRNOV, A.S

Smirnov, A. S.: Metody khimicheskogo analiza kotlovykh i pitatel'nykh vod (Methods of Chemical Analysis of Feed- and Boilers Water). Moscow: Gosudarst. Transport. Zheleznodorozh. Izdatel'stvo. 1954. 33 pp. CH

TAGER, S.A., kandidat tekhnicheskikh nauk; SMIRNOV, A.S., inzhener.

Improved plane sliding coal gate. Energetik 2 no.6:13-14 Je '54.
(Coal--Storage) (MLRA 7:7)

SMIRNOV, Aleksey Sergeyevich; SALENKO. S.V., inzhener, redaktor; BOBROVA, Ye.N., tekhnicheskiy redaktor

[Methods of analysing water, boiler scale and slime] Metody analiza vody, nakipi i shlama. Moskva, Gos.transp.zhel-dor. izd-vo, 1957. 165 p. (MLRA 10:6)
(Water--Analysis) (Feed water--Analysis)
(Locomotive boilers--Incrustations)

SMIRNOV, A.S., kandidat khimicheskikh nauk.

Quality control of cooling water for steam locomotive engines. (MLRA 10:8)
Vest. TSNII MPS 16 no.4:38-41 Je '57.
(Locomotives)

SMIRNOV, A.S.

104-3-30/45

AUTHOR: Smirnov, A.S., Engineer and Tager, S.A. Candidate of Technical Sciences.

TITLE: High speed stop and transfer valves for pulverised fuel pipes. (Bystrodeystvuyushchiy plotnyy klapan-pereklyuchatel' dlya pyleprovodov)

PERIODICAL: "Elektricheskiye Stantsii" (Power Stations), 1957, Vol. 28, No.3, pp. 79 - 80 (U.S.S.R.)

ABSTRACT: Pulverised fuel fired boilers have two burners each of which can take half the load; both burn continuously. Usually there are two pulverised fuel systems. Normal types of valve cannot be used on the piping of these systems and the article describes the special constructions that are recommended; they are illustrated by sketches. There is 1 figure..

AVAILABLE: Library of Congress

Card 1/1

GRISHIN, K.S.; SMIRNOV, A.S.

What kind of water must be used for cooling mercury-arc rectifiers?
Elek. i tepl. tepl. tiaga 3 no.3:43 Mr '59. (MIRA 12:5)
(Mercury-arc rectifiers--Cooling)

15.4100, 5.1000

77945
SOV/65-60-3-18/19

AUTHOR: Smirnov, A. S.

TITLE: New Types of Deemulsifiers

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, Nr 3, p 72 (USSR)

ABSTRACT: The pollution of streams and other natural waters by wastes from refineries is due to an inadequate desalting and removal of water from crude oil. The use of a new deemulsifier, nonionic surface-active substance OP-10 (ethoxylated alkylphenol), at 80° and 4 atm, decreases the salt content in crude oil to 30-50 mg/liter, and moisture content, to 0.1-0.3%. The consumption of deemulsifier per ton of crude oil amounts to 40-50 g as compared with 1.5-2 kg of the conventional type (neutral black contact, NBC). This new deemulsifier increases the efficiency of the desalting unit by 40-50%, and the water coming from this

Card 1/2

unit contains 100-200 mg/liter of petroleum and other suspensions as compared to 1,000-1,200 mg/liter in the case of the conventional deemulsifier. The All-Union Scientific Research Institute of the Petroleum Industry continues its efforts to develop more efficient deemulsifiers. The most promising among them are: ethoxylated coal phenols, alkylphenols, and dibutyl-paracresol.

GOLUBTSOV, V.A.; SMIRNOV, A.S., inzh.

Determining the efficiency of boiler units. Teploenergetika 8 no.6:93-94 Je '61. (MIRA 14:10)

1. Chlen-korrespondent AN SSSR (for Golubtsov).
(Boilers)

NIKULIN, Anatoliy Sergeyevich; SMIRNOV, Aleksandr Sergeyevich; YUNUSOV, Al'bert Gamzatovich; MASLOV, A.V., prof., red.

[Methodological instructions on organizing and conducting initial field training in surveying] Metodicheskie ukazaniia po organizatsii i provedeniiu pervoi uchebnoi geodezicheskoi praktiki. Moskva, Nedra, 1965. 115 p. (MIRA 18:11)

SMIRNOV, A. S.

"Threading Dies and Master Taps for Fine Threads,"
Stanki I Instrument, 16, No. 9, 1945

BR-52059019

SMIRNOV, A. S.

"Tapered Reamers with Screw Threads," Stanki I Instrument, 16, Nos. 10-11, 1945

BR-52059019

SMIRNOV, A. S.

"Allowances for Inaccuracy in Manufacture of Screw Taps for Trapezoidal Threads"
Stanki I Instrument, 17, Nos. 2-3, 1946

BR-52059019

SMIRNOV, A. S.

"The Problem of Introducing GOST 2789-45"
Stanki I Instrument, 17, Nos. 7-8, 1946

BR-52059019

PA 28T96

SMIRNOV, A. S.

USSR/Ships - Equipment and Supplies Mar/Apr 1947
Instruments - Marine

"Standardization of Instruments," A. S. Smirnov, Engr, 1 p

"Sudostroyeniye" No 2

In recent years a new bureau has been organized under the jurisdiction of the Ministry of Ship Construction and under the direct control of the Executive Body of the Ship Building Industry. This new bureau is known as the Basic Bureau for the Standardization of Instruments, and was organized to achieve greater standardization of equipment and instruments used aboard ship.

28T96

BS

SHIRNOV, A. S.

Shirnov, A. S. - "Surface finish in parts of devices (with editorial notes)," Pryborostroyeniye, Issue 5, 1948, p. 39-45.

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

Foundry Practice

S

Surface Quality of Parts Cast in Metal Moulds. A. S. Smirnov. (*Stanki i Instrument*, 1950, No. 4, 21). [In Russian]. The effect of the quality of mould surface on that of the part cast was experimentally investigated using 60 cast tensile test specimens.—S. K.

[illegible], A. P.

Chistota poverkhnostei i posadki. (Vestn. Mash., 1950, no.5, p. 13-16)

Cleanliness of surface and fits. DLC: TN4, VM

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

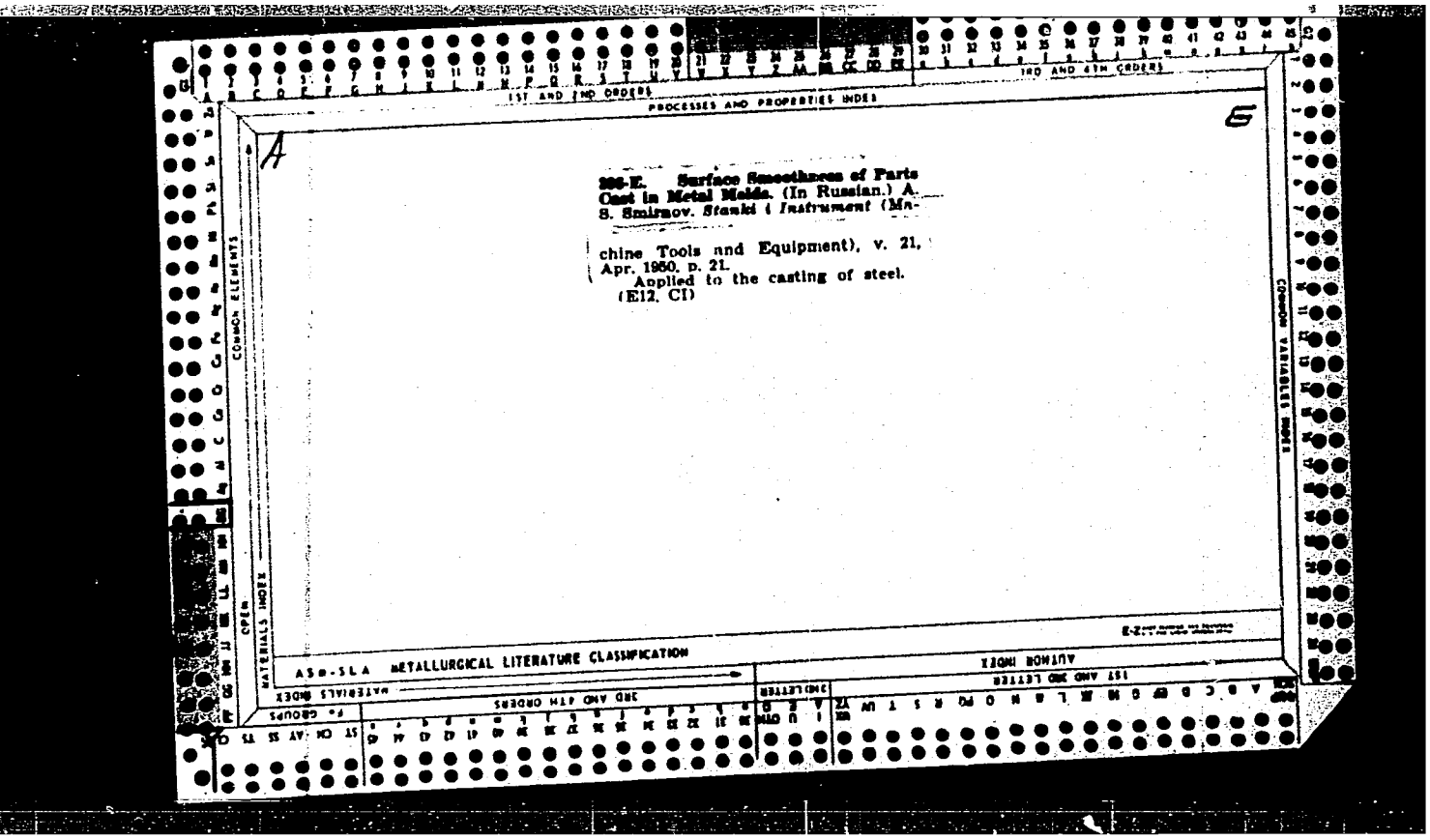
MIRNOV, [illegible] and KUZ'MIN, I. A.

Nekotorye voprosy konstruirovaniia litykh detalei. (Vestn. Mash., 1950, no. 9, p. 22-23)

Some problems concerning the design of cast machine parts.

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.



206-E. Surface Smoothness of Parts Cast in Metal Molds. (In Russian.) A. S. Smirnov. *Stanki i Instrument* (Machine Tools and Equipment), v. 21, Apr. 1950, p. 21.

Applied to the casting of steel.

(E12, CI)

SMIRNOV, A. S.

Dopuski dlia pressovykh soedinenii metallicheskikh detalei s nemetallicheskimi. (Vestn. Mash., 1951, no. 6, p. 9-12)

DLC: TN4.V4

Tolerances for pressed joints connecting metallic and nonmetallic machine parts.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SMIRNOV, A. S.

Grinding and Polishing

Feeder for delivering abrasive suspension material to the polishing machine 4-SHPS. Stek. i ker. 9, No. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

SMIRNOV, A. S.

Machine Tools - Standards.

Problems of setting norms for instruments,
Vest. Mash 32, No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952, UNCLASSIFIED.

SMIRNOV, A. S.

Metallurgical Abst.
June 1954
Foundry Practice and Appliances

*Precision and Surface Finish of Castings Made by the Lost-Wax Process. A. S. Smirnov and M. M. Pevzner (*Liteinoe Proizvodstvo*, 1953, (6), 3–5). [In Russian]. Results of over 5000 measurements on >300 small parts made by precision casting are analysed. The deviation from the mean distribution curves for different shapes and sizes is drawn and the tolerances estimated.—S. K. L.

SMIRNOV, A.S., inzhener.

Changes in cutting dimensions due to electroplating. Vest.mash. 33 no.10:72-74 O '53. (MLRA 6:10)

(Metal cutting) (Electroplating)

SMIRNOV, A.S.; YAKUSHEV, A.D., inzhener.

Surface smoothness modifications in electrodeposition. Standartizatsiia no.3:58-63 My-Je '54. (MLRA 7:6)

1. Nachal'nik instrumental'nogo otdela NII Ministerstva sudostroitel'noy promyshlennosti (for Smirnov).
(Electroplating) (Surfaces (Technology)--Standards)

USSR/Engineering - Thread standards

Card 1/1 : Pub. 128 - 8/38

Authors : Smirnov, A. S.

Title : Contribution to the problem of threaded joints with guaranteed clearances on the mean diameter

Periodical : Vest. mash. 9, page 36, Sep 1954

Abstract : A review is presented of Yu. L. Frumin's article published in the journal "Vest. mash. No. 3, 1953", concerning problems of standardizing threaded joints to secure their interchangeability.

Institution : .....

Submitted : .....

SMIRNOV, A.S.; RADUGIN, A.A., inzhener.

Constructive shaping of part elements from plastic material.
Vest.mash.34 no.1:39-42 Ja '54. (MLRA 7:2)
(Mechanical engineering)

SMIRNOV, A.S., inzhener (Leningrad)

Interrelation between precision and surface smoothness. [Izd.]
LONITOMASH no.34:117-122 '54. (MLRA 8:10)
(Surfaces (Technology))

SMIRNOV, Aleksey Sergeyevich; TSAL, K.I., redaktor; FRUMKIN, P.S., tekhnicheskiy redaktor.

[Standardization of tolerances in the instrument industry] Normalizatsiia dopuskov v priborostroenii. Leningrad, Ges. soiuznoe izd-ve sudostroit. promyshl., 1955.111p. (MLRA 9:5)
(Instrument industry) (Tolerance (Engineering))

SMIRNOV, A.S.

Shortcomings of flange standards. Standartizatsiia no.6:55-57 N-D '55.
(Flanges--Standards) (MLRA 9:2)

SMIRNOV, A.S.

Allowance standards for casting. Standartizatsiia. no.5:63-66 S-O '56. (MLRA 10:1)

(Founding--Standards)

AUTHOR: Smirnov, A.S. 28-6-21/40

TITLE: Angle Tolerances (Dopuski na uglovyye razmery)

PERIODICAL: Standartizatsiya, 1957, # 6, pp 59-62 (USSR)

ABSTRACT: The author points out that as yet there is no " ГОСТ" in existence that would regulate the standard series of angles and tolerances for angles of machine part surfaces for all possible kinds of connections including angles between surfaces.

Information on the present USSR practice of selecting tolerances is given and the existing branch standards ("normali") are mentioned, as are also the standards for tapers and taper gages in the normali of the Bureau of Interchangeability.

A new general angle tolerance system developed in the instrument industry is described and shown by a chart. This system subdivides tolerances into 10 accuracy classes.

There are 3 charts and 3 diagrams.

AVAILABLE: Library of Congress

Card 1/1 1. Industry-USSR 2. Angles-Tolerance-Standards

SMIRNOV, A.S., inzhener.

Nomographic calculation of allowances for distances between hole centers. Vest. mash. 37 no.7:21-24 Jl '57. (MLRA 10:8)
(Machine-shop practice--Graphic methods)

SMIRNOV, Aleksey Sergeyevich; RADUGIN, Aleksey Aleksandrovich; ZOTKIN, A.P., otv.red.; LEVOCHKINA, L.I., tekhn.red.

[Efficient designing of molds and dies] Opyt skorostnogo proektirovaniia pressform i shtampov. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1958. 138 p. (MIRA 12:4)
(Plastics)

PHASE I BOOK EXPLOITATION 1093

Smirnov, Aleksey Sergeyevich

Dopuski i posadki v priborostroyenii (Tolerance and Fits in Instrument Making) Leningrad, Sudpromgiz, 1958. 172 p. 6,500 copies printed.

Scientific Ed.: Myagkov, V.D.; Ed.: Lapin, V.I.; Tech. Eds.: Kontorovich, A.I. and Frumkin, P.S.

PURPOSE: This book is intended for designers and technicians working in the instrument-making industry and may also be used by students of vuzes and tekhnikums specializing in this field.

COVERAGE: On the basis of experience of departmental and interdepartmental standardization in the field of interchangeability of parts and surface finish the author gives recommendations on basic requirements of dimensioning parts and selecting fits and tolerances. Special tolerances not included in the All-Union System are developed and data on the effect of dimensioning and

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GO/mfd
1-28-59

PHASE I BOOK EXPLOITATION 1093

Smirnov, Aleksey Sergeyevich

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Card 1/4

tolerances on engineering qualities of parts are given. No personalities are mentioned. There are 15 Soviet references.

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AVAILABLE: Library of Congress

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1-28-59

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SMIRNOV, A.S.

25(6) p 3 PHASE I BOOK EXPLOITATION SOV/1328

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Leningradskoye oblastnoye pravleniye

Vzaimozamenyayemost', tochnost' i metody izmereniya v mashinostroyenii (Interchangeability, Accuracy and Measuring Methods in Machine Building) Moscow, Mashgiz, 1958. 251 p. (Series: Its: Sbornik, km. 47) 6,000 copies printed.

Eds.: Kutay, A.K., Candidate of Technical Sciences, Docent; Puzanova, V.P., Candidate of Technical Sciences; Kempinskiy, M.M., Engineer; Rubinov, A.D., Candidate of Technical Sciences; Turetskiy, I. Yu., Candidate of Technical Sciences; and Abadzhi, K.I., Engineer; Ed. of Publishing House: Simonovskiy, N.Z.; Tech. Ed.: Sokolova, L.V.; Managing Ed. for Literature on Machine Building Technology (Leningrad Division, Mashgiz); Naumov, Ye. P., Engineer.

PURPOSE: This book is intended for plant engineering, scientific and technical personnel and production innovators. It may also be

Card 1/9

Interchangeability, Accuracy and Measuring Methods (Cont.) SOV/1328

useful to students of higher technical institutes.

COVERAGE: This collection of articles deals with the topics discussed at the Third Leningrad Scientific and Engineering Conference on Interchangeability, Accuracy, and Inspection Methods in Machine-building and Instrument-making, held March 18-22, 1957. The book consists of three parts: 1) interchangeability in machine-building and instrument-making 2) manufacturing accuracy and quality control 3) engineering measurements. The first part deals with basic principles of interchangeability, establishment of the system and calculation of tolerances. The second part deals with calculation and analysis of the accuracy of manufacturing processes, machine subassemblies and quality control. The third part consists of articles dealing with improvements in measuring instruments and methods. Special emphasis is placed on the measurement of large parts. A new method of calculating accuracies of measuring instruments is discussed in the article by M.M. Kempinskiy.. There is no bibliography.

Card 2/9

Smirnov, A.S.

AUTHOR: Smirnov, A.S., Engineer 28-58-2-30/41

TITLE: Normalization of Diameters and Length by Preference Numbers (Normalizatsiya diametrov i dlin po predpochtitel'nym chislam)

PERIODICAL: Standartizatsiya, 1958, Nr 2, pp 73-75 (USSR)

ABSTRACT: The article is concerned with standard lengths and diameters accepted in the machine building industry. The author points out that the "normal" standards issued in past years do not contain indications as to which of the standard dimension series established by the "GOST 6636-53" ("Normal Diameters and Lengths in Machine Building") are to be preferably used in different applications. The designers prefer to use diameters of the preference number series "Ra5" and "Ra10" (although all other series can be used); stocks of gages as well as stocks of tools and raw materials at plants, in practice are not at all planned in accordance with scientific data, and there are surpluses of some stocks and deficiencies of others. The author emphasizes the importance of strict compliance with the preference number series system, without which unification and normalization in the machine industry will be very difficult to achieve. There are 3 tables.

AVAILABLE: Library of Congress
Card 1/1
1. Preference numbers-Applications 2. Industrial standards-USSR
3. Standardization-USSR

14(7) SOV/119-59-2-7/17

AUTHOR: Smirnov, A. S., Engineer

TITLE: Manufacturing of Glands and Their Tolerances (Proizvodstvo sal'nikov i dopuski na nikh)

PERIODICAL: Priborostroyeniye, 1959, Nr 2, pp 19-20 (USSR)

ABSTRACT: According to the standard specification GOST-4852-55 the mounting holes of the glands must be manufactured with a certain precision. In order to make the mounting holes fit precisely into the counterholes, drilling the holes requires a certain precision.
It is shown that it is easier for manufacturing to give the mounting holes of the glands more tolerance so that no rework on the holes in the counterpart will be necessary. The tolerable deviations in manufacturing glands are given in a table for different diameters of the mounting holes.
There are 3 figures, 3 tables, and 1 Soviet reference.

Card 1/1

SMIRNOV, A.S.

Manufacturing stuffing boxes with permissible tolerances.
Priborostroenie no.2:19-20 F '59. (MIRA 12:2)
(Packing (Mechanical engineering))

28(3; 25(2)

SOV/28-59-4-5/19

AUTHOR: Smirnov, A.S., Engineer

TITLE: Problems of the Normalization Control in Machine Building and Instrument Building (Voprosy normalizatsionnogo kontrolya v machinostroyenii i priborostroyenii)

PERIODICAL: Standartizatsiya, 1959, Nr 4, pp 16-18 (USSR)

ABSTRACT: The author discusses the purposes and the organization of normalization control as it is practiced by Normalization and Standardization Departments of the plants and as it should be. Some staff members of the departments consider it their major duty to watch all details of the drawings and symbols and inscriptions. Frequently normalization control constitutes an obstacle to the development of new designs. The author discusses the question: At what stage of development is standardization rational?

Card 1/2

KALANDADZE, Georgiy Viktorovich. Prinimali uchastiye: SMIRNOV, A.S.; BARSUKOV, P.V.; SMIRNOV, A.V., nauchnyy red.; BARSUKOV, P.V., nauchnyy red.; SOKOLOVA, M.A., red.; PERSON, M.N., tekhn.red.

[Course in mechanical drawing] Kurs cherchcniia. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 410 p. (MIRA 13:5)

(Mechanical drawing)

SMIRNOV, A.S.

Standardizing tolerances for arrangement in the manufacture of instruments. Standartizatsiia 24 no.7:12-15 Jl '60. (MIRA 13:7)

(Tolerance (Engineering))
(Instrument manufacture)

SMIRNOV, A.S.

Allowances for castings. Vest.mash. 40 no.9:23-26 S '60.
(MIRA 13:9)
(Molding (Founding))

SMIRNOV, A.S.

Standardization as a subject for teaching. Standartizatisiia 25 no.2:42-43 F '61. (MIRA 14:3)
(Standardization—Study and teaching)

SMIRNOV, A.S.

Screwing ability of electroplated threaded parts. Vest.mash. 41 no.9:43-44 S '61. (MIRA 14:9)

(Screws)

SMIRNOV, Aleksey Sergeyevich; MYAGKOV, V.D., nauchnyy red.; NIKITINA, M.I., red.; KRYAKOVA, D.M., tekhn. red.

[Fundamentals of standardization in the instrument industry] Osnovy normalizatsii v priborostroenii. Leningrad, Sudpromgiz, 1962. 77 p. (MIRA 15:8)
(Instrument industry) (Standardization)

SMIRNOV, A.S.

Standardization of allowances for nonferrous alloy castings.
Standartizatsiia 29 no.1:25-28 Ja '65. (MIRA 18:4)

L 24504-66 EWT(d)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l) JD/HM

ACC NR: AP6007716 SOURCE CODE: UR/0413/66/000/003/0118/0118

AUTHOR: Zaytsev, M. P.; Kholopov, Yu. V.; Smirnov, A. S. 36 B

ORG: none

TITLE: Ultrasonic seam-welding unit. Class 49, No. 178656 18 14 18

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 118

TOPIC TAGS: welding, ultrasonic welding, seam welding, ultrasonic welder

ABSTRACT: An Author Certificate has been issued for an ultrasonic seam welder equipped with a magnetostrictic converter and a disk device. To ensure continuous feeding of ultrasonic vibrations to the welding zone, the magnetostrictic converter is in the form of a ring with the disk mounted on top of it (see Fig. 1). [LD]

Card 1/2 UDC: 621.791.16.002.5

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L 24537-66 EWT(d)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l) IJP/HM

ACC NR: AP6007717 SOURCE CODE: UR/0413/66/000/003/0118/0119

INVENTOR: Kholopov, Yu. V.; Smirnov, A. S.

ORG: none

TITLE: Device for ultrasonic seam welding. Class 49, No. 178657

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 118-119

TOPIC TAGS: seam welding, ultrasonic welding, ultrasonic seam welding, welder, ultrasonic seam welder

ABSTRACT: An Author Certificate has been issued for an ultrasonic seam welder with an active resonant tube as a working element. To speed up the welding process, the reflector is a passive resonant tube for applying pressure to the parts to be welded. [LD]

SUB CODE: 13/ SUBM DATE: 24Feb64/

UDC: 621.791.16.002.5

Card 1/1

ACC NR: AP7001456 (A) SOURCE CODE: UR/0413/66/000/021/0201/0201

INVENTORS: Smurov, A. M.; Smirnov, A. S.

ORG: none

TITLE: A stamp for punching forgings. Class 49, No. 188273 [announced by Scientific Research Institute of the Automotive Industry Engineering (Nauchno-issledovatel'skiy institut tekhnologii avtomobil'noy promyshlennosti)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 201

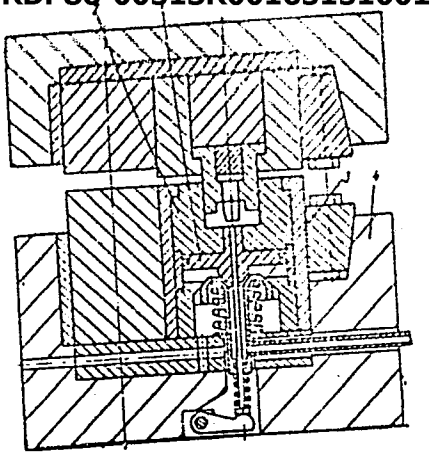
TOPIC TAGS: metal forging, metal forming, metal stamping, metallurgic machinery, metallurgic process, metalworking

ABSTRACT: This Author Certificate presents a stamp for punching forgings. The die of the stamp contains a compensating recess covered by a back pressure assembly (see Fig. 1). To provide for a free expulsion of the excess metal into the compensating recess and to diminish the deforming power, the back pressure assembly is made in the form of a cylinder with a piston, mounted on the lower plate of the stamp. The opening under the piston is accessible to the external atmosphere through a spring-loaded valve which interacts with the piston under the action of the metal being squeezed into the compensating recess.

Card 1/2 UDC: 621.733.76

ACC NR: AP7001456

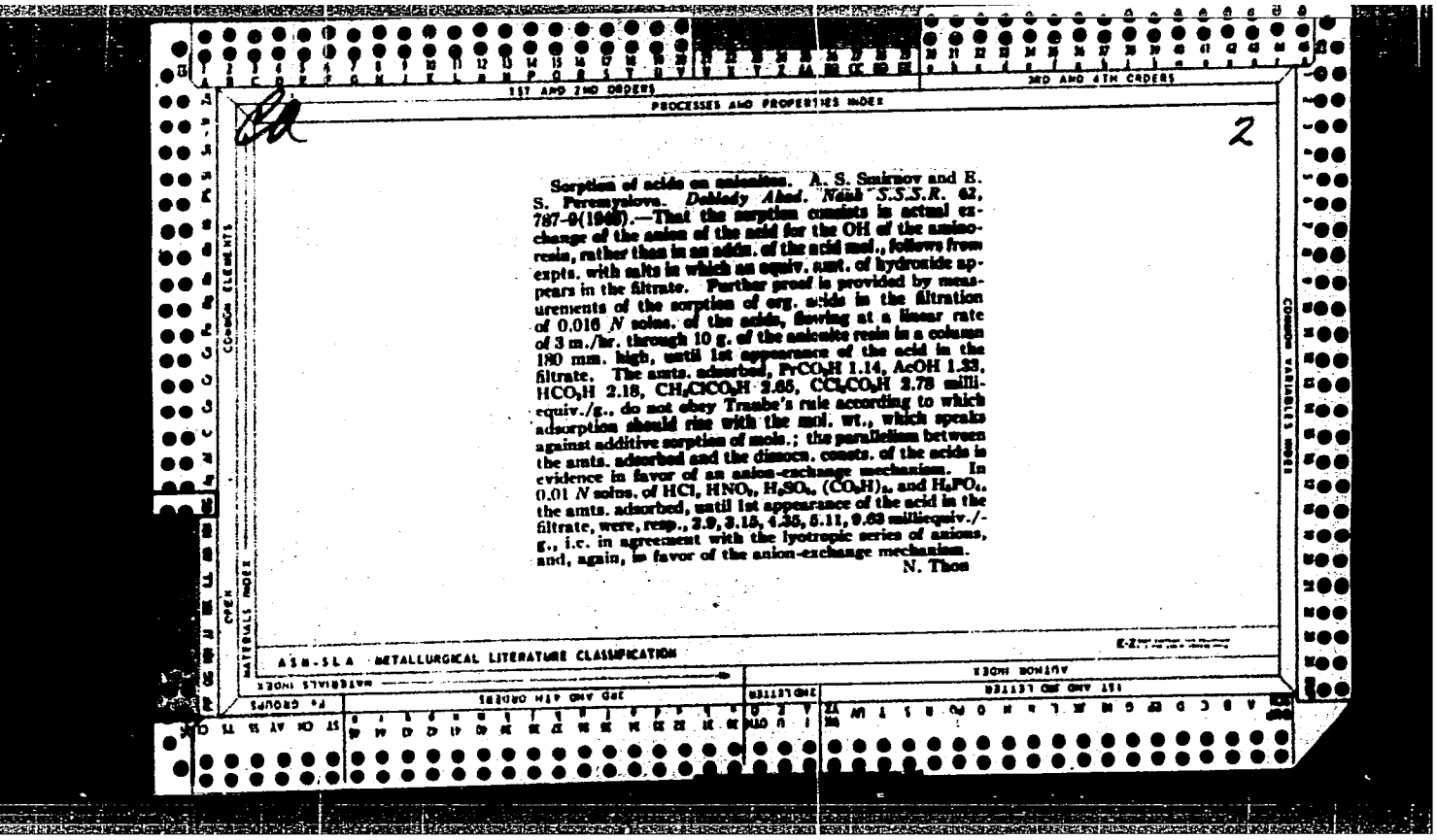
Fig. 1. 1 - piston; 2 - cylinder of the piston; 3 - spring-loaded valve; 4 - lower plate of the stamp



Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 28Nov64

Card 2/2



PROCESSES AND PROPERTIES INDEX

2

Sorption of acids on anionites. A. S. Smirnov and E. S. Peremyslova. *Doklady Akad. Nauk S.S.S.R.* 62, 787–9(1948).—That the sorption consists in actual exchange of the anion of the acid for the OH of the anionoresin, rather than in an addn. of the acid mol., follows from expts. with salts in which an equiv. amt. of hydroxide appears in the filtrate. Further proof is provided by measurements of the sorption of org. acids in the filtration of 0.016 *N* solns. of the acids, flowing at a linear rate of 3 cm./hr. through 10 g. of the anionite resin in a column 180 mm. high, until 1st appearance of the acid in the filtrate. The amts. adsorbed, $PrCO_2H$ 1.14, AcOH 1.53, HCO_2H 2.18, CH_2ClCO_2H 2.65, CCl_3CO_2H 2.78 milliequiv./g., do not obey Traube's rule according to which adsorption should rise with the mol. wt., which speaks against additive sorption of mols.; the parallelism between the amts. adsorbed and the dissocn. consts. of the acids is evidence in favor of an anion-exchange mechanism. In 0.01 *N* solns. of HCl, HNO_3, H_2SO_4, $(CO_2H)_2$, and H_3PO_4, the amts. adsorbed, until 1st appearance of the acid in the filtrate, were, resp., 2.9, 3.15, 4.35, 5.11, 9.63 milliequiv./g., i.c. in agreement with the lyotropic series of anions, and, again, in favor of the anion-exchange mechanism.

N. Thon

CA

2

ance of the solubility of the sorption compounds on the sorption capacity of cationites. A. B. Stakinov and M. M. Bluvshtein. *Doklady Akad. Nauk S.S.S.R.* 70, 449-51 (1950).—The assumption that sorption of a given cation by a cationite resin should be greater and more selective if the sorbed ion forms a sparingly sol. compd. with the active group of the cationite was verified in expts. with (I) a pyrogallol condensation product and (II) a formaldehyde-resorcinol condensation product. The active groups in both these cationites are phenolic OH groups. Dynamic expts. with a rate of filtration of 3 m./hr. (10 ml./min.), with 0.002 *M* solns. of $Bi(NO_3)_3.5H_2O$, $PbCl_2$, $HgCl_2$, $CaCl_2.6H_2O$, and $FeSO_4.7H_2O$, at pH = 2 throughout (in order to avoid hydrolysis of the Bi salt), gave the following results (sorption in relative units [Ca^{++} = 1.0], and in mg. equiv./g. $\times 10^{-1}$; in the order listed): I 180 and 2.73; 80 and 1.40; 45 and 1.20; 1.0 and 0.080; 0.9 and 0.036; II, 7 and 0.34; 1.4 and 0.065; 1.3 and 0.080; 1.0 and 0.046; 0.9 and 0.040. These data refer to passage of equal vols. of the solns. The high sorption, by I of ions Bi^{+++}, Pb^{++}, and Hg^{++}, is linked with the known insoly. of the compd. of pyrogallol with Bi and the very low solubilities of its compds. with Pb and Hg, as against the easy soly. of compds. of Fe and of Ca with both pyrogallol and resorcinol. N. Thon

1957

SMIRNOV, A. S.

3966

Comparative study of a secondary emission of potassium chloride films under the impact of atomic and molecular (+) ions. V. M. Lovtsov and A. S. Smirnov. *Doklady Akad. Nauk Uzbek. S.S.R.* 1953, No. 4, 8–12; *Referat. Zhur., Fiz.* 1955, No. 951.—The coeff. of ionic-electronic emission γ (no. of secondary electrons for one falling ion) is measured with KCl films under the effect of a series of at. and mol. ions. Measurements are conducted at a pressure about 10^{-4} mm. of Hg. The films are $\sim 10^{-4}$ cm. wide. Energy of the ions is between 300 and 2000 e.v. It is found that in the integral Li^+–F^+ (where mass of the ions is much less than atoms of the target) γ increases monotonously. With the change from F^+ to Na^+, γ is greatly decreased (more than twice as much). On the section from Na^+–Cl^+, γ increases and reaches a max. approx. at the point where the masses of the target atoms and of the falling ion are equal. A qual. explanation is offered for the mechanisms observed.

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Electron emission of alkali-halide salt thin films subjected to alkali metal ion bombardment. Trudy Fiz.mat. inst. AN Uz. SSR 5: 82-101 '53. (MLRA 9:1)

(Electrons) (Ion beams) (Alkali metal salts)